

REMARKS

In the Office Action mailed January 12, 2006, the Examiner rejected claims 21-40. By way of the foregoing amendments and the markings to show changes, Applicants have amended claims 21-28, and 41. The foregoing amendments are taken in the interest of expediting prosecution and there is no intention of surrendering any range of equivalents to which Applicants would otherwise be entitled in view of the prior art.

Claim Rejections under 35 USC 103

Claims 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steuart (1,581,884) in view of various combinations of one or more of the following references: Davidson et al. (6,197,043); Masubuchi et al (6,472,442); Kurata et al. (4,547,655); Sugiyama et al. (6,414,270); Nagai et al. (6,808,825); Plummer et al. (6,284,809); Haag et al. (6,093,908); and Noda et al. (4,631,976). These rejections are respectfully traversed.

Claims 21 and 31

During an Interview between Examiner Fastovsky, Supervisory Patent Examiner Jeffrey, who was acting on behalf of Supervisory Patent Examiner Evans, and the undersigned on March 15, 2006, it was agreed that amending independent claims 21 and 31 to better describe a laminate structure and providing a discussion of how the claimed invention is distinguished from the Steuart reference in detail would be more likely to impart patentability to those claims. Thus, in the interest of expediting prosecution and without acquiescing in the Examiner's rejections, Applicants have amended independent claims 21 and 31 and believe claims 21 and 31 are patentable over the cited art, along with the claims that depend therefrom.

As stated in the MPEP, section 2141.02, "In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip*

Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983)"

As indicated during the interview, the laminate structure of the claimed invention, as a whole, provides for a durable heater that facilitates ease of assembly and/or manufacture. Moreover, the laminate structure provides a heater that is easy to assemble over a portion of the steering wheel without losing the integrity of the heater itself. Applicants submit that such a laminate structure, as recited in claims 21 and 31, having multiple layers, each layer having specific properties, and a patterned heating element, is unique and offers advantages in assembly of the heater itself, and additionally, assembly of the heater to a steering wheel, which is not suggested in any of the cited art or combinations of the cited art.

Of particular interest, Steuart discloses a steering wheel having a casing (5) designed to be stretched over the rim of the steering wheel. The casing (5) of Steuart includes a heating element (6) encased in a sheath (7) of woven asbestos, which, in turn, is embedded within the mass of the casing (5) (col. 2, lines 78-89 and Figure 3). Ends of the heating element extend exteriorly from the sheath (7) and are protected from direct contact with the casing by pieces of sheet asbestos (18) and (19), which are laid in place before the casing and its contained parts are vulcanized together (col. 3, lines 31-39 and Figure 2). The Examiner relies on the sheath (7) to be the cushion and the sheet of asbestos (18) and (19) to be the separator of the claims of the present application and that heater (6) lies between the sheath (7) and the sheet of asbestos (18) and (19). Applicants point out that only the ends of the heater that extend out of the sheath material are covered by the sheets (18) and (19) in order to protect the ends of the heater from contacting with the casing. This arrangement is different from the present invention where the heater is placed substantially entirely between the cushion and separator. Moreover, Steuart does not teach or suggest the sheath (7) and sheets (18) and (19) being laminated together and coextensive with each other. As such, the heater of Steuart is different from the laminate structure of the claimed invention. Particularly, the laminate structure of claims 21 and 31 calls for a heater having multiple layers, more specifically, two separate layers with specific properties, a cushion and a separator, where a conductor is substantially entirely between the cushion and separator and where the two separate layers are laminated

together and are coextensive with each other. Neither Steuart nor the other cited references, alone or in combination, disclose or suggest this overall combination and configuration of layers that make up the heater as claimed and which provides the advantages as discussed above.

Claim 37

Applicants submit that claim 37 includes similar limitations as now amended claims 21 and 31. Claim 37 currently claims a steering wheel having a heater disposed between the core and the outer covering of the wheel, the heater including a cushion as a layer of polymeric material, a separator as a fleece layer that is substantially coextensive with the cushion, and a conductor substantially entirely between the cushion and the separator wherein the cushion and separator have recited properties. Thus, Applicants submit that claim 37, which by the same reasons as recited in relation to claims 21 and 31, is different from the configuration disclosed in Steuart or in the other cited references, alone or in combination.

Applicants further traverse the rejections of claim 37 for additional reasons below:

As stated in the MPEP 2143.03, “To establish prima facie obviousness...all the claim limitations must be taught or suggested by the prior art.” *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Moreover, the MPEP states that, “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The MPEP also reads, at section 2141.01(a), that “In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).¹

¹ Applicants note that the Office Action suggests that Davidson et al., Masubuchi et al., Nagai et al. and Plummer et al. are each from analogous arts. As such, Applicants contend that any assertion that any of these reference are reasonably pertinent to the problem with which the inventor was concerned would be an inappropriate new grounds of rejection if it were to be

Steuart Reference

Applicants additionally traverse claim 37 on the grounds that the Office Action failed to establish a *prima facie* case of obviousness against that claim. In particular, claim 37 recites the cushion being made of a material that has elongation characteristics permitting it to be elongated at least about 50% of its own length prior to failure. Applicants point out that the sheath (7) in Steuart, as suggested in the Office Action to be the cushion of the present invention, is not composed of a material having specific elongation characteristics. Moreover, the sheath (7) of Steuart is capable of elongation only because of the manner in which it is wrapped and not due to the material it is made out of. Specifically, Steuart et al. in col. 3, lines 24-31 reads:

In this case, elongability is secured by making the sheaths in the form of an overlapped flat spiral 21 of asbestos tape, the folds of which are independent of one another and relatively movable so that the sheath and the zig-zag heating element which it encloses can stretch simultaneously with the expansion of the elastic casing.

As such, Steuart does not teach or suggest having a cushion made of a material that has elongation characteristics permitting it to be elongated at least about 50% of its own length prior to failure as recited in claim 37.

Davidson Reference

In rejecting claim 37, the Office Action combines Davidson et al. with Steuart et al. Specifically, the Office Action attempts to use the Davidson reference to modify the Steuart reference to include an elongation range of up to 1000% for the sheath. However, Applicants submit that the Davidson reference is directed to isoelastic polymer surgical suture constructs, which is non-analogous art relative to steering wheel heaters.. The Davidson reference is unrelated to steering wheel heaters. The Office Action suggests that Davidson et al. is from an analogous art concerned with stretching-elongation. However, stretching-elongation is a property and not a field of endeavor or particular art. Moreover, considerations for designing surgical sutures are vastly different from considerations relevant to steering wheel heaters designs. As

asserted in a Final Office Action. Also, however, Applicants discuss herein that design considerations for the subject matter of those references relative to steering wheel heaters are quite different such that their problems are quite different from problems faced in steering wheel heater design.

such, the skilled artisan would be very unlikely to look to Davidson for subject matter to modify Steuart et al.

Masubuchi Reference

The Office Action combines Masubuchi et al. with Steuart et al. to modify the Steuart reference to include an elongation range of up to 800% for its sheath. While the Office Action does not specifically apply Masubuchi against claim 37, Applicants address Masubuchi since it is used in a manner similar to Davidson. In particular, Applicants contend that Masubuchi is from a non-analogous art relative to steering wheel heaters. The Masubuchi reference teaches a steering wheel gripping part, which has nothing to do with heating of steering wheel. Moreover, considerations for designing steering wheel heaters such as accommodation of a heating element are vastly different from considerations for designing gripping parts. As such, the skilled artisan would be very unlikely to look to Matsubuchi for subject matter to modify Steuart et al.

Nagai and Plummer Reference

In rejecting claim 37, the Office Action combines Nagai et al., Plummer et al., and various combinations of one or more references with Steuart et al. With respect to the Nagai reference, the Office Action attempts to use the Nagai reference to modify the Steuart reference to disclose a conductor having copper up to 1% and nickel up to 2.5%. However, Applicants submit that the Nagai reference is directed to a printed wiring board having various wiring patterns, which is non-analogous art relative to steering wheel heaters. With respect to the Plummer reference, the Office Action attempts to use the Plummer reference to modify the Steuart invention to include a thermal conductivity range less than 0.12 watts/m K. However, Applicants submit that the Plummer reference is directed to foam composition for insulating oil pipelines, which is non-analogous art relative to steering wheel heaters. The Plummer and Nagai reference do not disclose and are unrelated to heated handles and steering wheel heaters. Moreover, there are different considerations related to the design of a printed board or an oil pipeline as opposed to a steering wheel such as size, flexibility

and environment of use. As such, the skilled artisan would be very unlikely to look to neither Nagai and/or Plummer for subject matter to modify Steuart et al.

For the foregoing reasons, Applicants assert that the obviousness rejection of claim 37 should be withdrawn.

Moreover, Applicants point out that it would likely be improper to present a final rejection of claim 37 on a ground alternative to that already presented since Applicants have not amended the claim in a manner, which would necessitate such alternative grounds. In particular, the MPEP reads:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee..." MPEP 706.07(a)

Thus, any new grounds of rejection, "that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee..." would be improper.

CONCLUSIONS

In view of Applicants' amendments and remarks, the Examiner's rejections are believed to be rendered moot. Accordingly, Applicants submit that the present application is in condition for allowance and requests that the Examiner pass the case to issue at the earliest convenience. Should the Examiner have any question or wish to further discuss this application, Applicant requests that the Examiner contact the undersigned at (248) 292-2920.

If for some reason Applicant has not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent the abandonment of this application, please consider this as a request for an extension for the required time period and/or authorization to charge our Deposit Account No. 50-1097 for any fee which may be due.

Respectfully submitted,



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